A LIFE COURSE PERSPECTIVE ON NON-METRO VS. METRO POVERTY AND ECONOMIC ATTAINMENT IN THE TRANSITION TO ADULTHOOD IN THE UNITED STATES (1980-2009)

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by

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ABSTRACT

In the wake of the Great Recession, a great deal of attention has focused on the dearth of opportunities presently available for young adults transitioning into the workforce; however, little concrete analysis exists regarding how the prevalence of poverty among young adults has shifted within a longer historical time frame or in non-metro areas. Using PSID data, this thesis uses life tables and the Cox proportional hazard model to examine non-metro vs. metro variation in the probability of experiencing a year of poverty or economic attainment between the ages 25-30 in reference to a number of covariates. Results indicate that, while poverty is unevenly distributed across non-metro and metro areas, residence is not a significant predictor of poverty or economic attainment when historical context, family background, and individual level characteristics are taken into account. Family socio-economic status (measured as average family income from age 12-16), individual education, service-sector occupation, and race are found to be the most significant predictors of both poverty and economic attainment.

BIOGRAPHICAL SKETCH

Paul Berry grew up in Pfafftown, North Carolina and is a graduate of North Forsyth High School. He received a Bachelor of Arts degree from the University of Virginia before entering the Ms/PhD program in Development Sociology at Cornell University in the fall of 2010. When not studying or teaching, he can usually be found biking, running, or skiing out in one of state forests surrounding Ithaca.

Illegitimi non carborundum

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I. Introduction:

In the wake of the Great Recession, a great deal of media attention has focused on the lack of opportunities presently available for young adults and the polarization of American society; however, little concrete analysis exists regarding how the incidence of poverty and economic attainment among young adults has shifted within a longer historical time frame and in non-metropolitan areas.

Historically situated within the dramatic economic restructuring which has taken place since the 1980s, I use data from the Panel Study on Income Dynamics from 1980-2009 to examine the economic experience of non-metro young adults between the ages of 25 and 30 both over historical time and in comparison to their metro counterparts. It is during this time period that dramatic economic restructuring has taken place within the United States in general and in rural America in particular—real wages have stagnated and stable manufacturing jobs have moved abroad, giving rise to poorly paid jobs in the service sector. Within this historical context, the paper examines poverty and economic attainment in young adulthood over the past thirty years using the life course perspective.

The life course perspective provides a useful framework for thinking about how individual lives unfold and how historical events and transitions affect trajectories extending over the individual life span, or over significant portions of it—this project focuses on the transition to adulthood. This stage of the life course is of particular importance for study due to the concentration of critical life events in the

realm of family, education, and employment which often occur in a relatively short amount of time. The present study situates this critical juncture in the life course in reference to childhood family background and also maintains the life course perspective's emphasis that events in the present shape future life trajectories.

Framed in reference to the life course perspective, this paper addresses one central research question: controlling for historical context, family background, and individual level variables, does a residential difference in poverty or economic attainment persist between non-metro and metro areas in the transition to adulthood in the United States? Life tables are utilized in order to assess residential differences in the incidence of poverty and economic attainment over the time period studied. The Cox proportional hazard model is then used in order to compare the relative risk of poverty or economic attainment based on the factors listed above.

In the process, this paper makes several contributions to existing literature. First, it adds knowledge to an understudied issue since little scholarly analysis compares economic outcomes in the transition to adulthood between non-metro and metro areas. Second, this study is the first to use panel data to investigate economic outcomes in the transition to adulthood in non-metro areas. Data from all thirty-six waves of the Panel Study on Income Dynamics (PSID) is utilized in order to investigate family and individual level variables associated with the research question since the PSID allows individual economic outcomes to be observed over a longer period of time than in cross sectional data (in this case six years), permits detailed

comparisons to be made in reference to family background, and facilitates investigation of period effects. This paper is also the first to examine non-metro vs. metro variation in economic outcomes in the transition to adulthood over an extended period of time. Finally, the present study is unique since both poverty and economic attainment are examined, thus avoiding a common trend in research to focus exclusively on the incidence and determinants of poverty while avoiding discussion of the factors contributing to success and economic polarization.

Focus on Economic Outcomes in the Transition to Adulthood

An emerging literature among economists and sociologists examines whether changes in the transition to adulthood have taken place in recent decades. Although there is not a specific age range associated with the phase of the life course, research on the transition to adulthood conventionally studies one or more of the following five indicators: completed schooling, economic independence, establishment of one's own household, marriage, and the onset of parenting or childbearing (Settersten et al. 2005). There is little disagreement as to whether, on aggregate, changes have occurred in the achievement and timing of these markers in recent decades. For instance, the median age at first marriage has steadily risen for both men and women in the US from 22.8 and 20.3 in 1960 to 28.2 and 26.1 in 2010 (US Census Bureau). Furthermore, much evidence exists that young adults are taking longer to reach

economic independence. This phenomenon is particularly severe among young males since, compared to the 1970s, young men are taking longer to reach economic independence regardless of education level (Danziger and Rouse, 2007).

This study further contributes to literature on economic outcomes (as opposed to marriage, childbearing, or education) within the transition to adulthood. Specifically, I focus on the probability that individuals will experience a year of either poverty or economic attainment between the ages of 25 and 30. An income equal to five times the poverty line is used to define economic attainment. This definition is not intended to represent an unequivocal measure of economic attainment; rather it is intended to set a benchmark against which variation in metro vs. non-metro economic outcomes might be compared as individuals move higher up the income ladder. It is hypothesized that the covariates examined in the final model will have a different effect on poverty compared to economic attainment. For this reason, I argue that it is important to examine the relationship between poverty and economic attainment in order to achieve a full picture of factors driving differential economic outcomes in the transition to adulthood.

II. Theoretical Background: the Life Course & the Transition to Adulthood

"The essence of being in your twenties in the Thirties was that no matter how well tuned up you were, you stayed on the ground. Many of us stayed on the ground, or just above it, for ten years."
-'Veteran' in Glen Elder's Children of the Great Depression (p 273)

The life course perspective is the primary theoretical framework adopted by this paper. Since the landmark study *Children of the Great Depression*, the life course perspective has grown in prominence, now an influential framework for considering how individual lives unfold in the context of historical events and transitions (Elder 1974; Elder 1994; Mayer 2000; Dewilde 2003). Life course research has benefitted from the increasing quality and availability of panel data and is now deployed across disciplinary boundaries in sociology, demography, economics, and medical research (Mayer 2009).

The quote above by the 'veteran' of the Great Depression from Elder's landmark study highlights both the long lasting influence of this historical event and the way it was experienced differently by age. This captures the two salient features of this perspective: 1) including time as a dimension of analysis, and 2) considering the role of historical events in shaping how individual lives unfold (Elder 1974, 1994).[1] In this section I will elaborate on each of these two features, relate them to the transition

[1] In writing *Children of the Great Depression*, Elder focused on the family as the link between the large historical forces and the individual children. Later he would refine the life course perspective (moving away from socialization, as was the traditional focus in social psychology at that time) and refine the life course perspective to focus more on the individual (Elder, 1994). This study, though informed by *Children of the Great Depression*, draws more directly from the individualized framework adopted later.

to adulthood, and clarify the relationship of the life course perspective to the present study.

Including time as a dimension of analysis

By following an individual's progression from one life stage to another, such as from childhood to adulthood or old age, the researcher is able to observe a range of events not visible though point-in-time observations. For example, scholarship on poverty across the life course has shown that a rising percentage of working age Americans experienced at least one year of poverty between 1969 and 2000 while the Census cross-sectional rates show little change over the same time period—a life course perspective on poverty revealed many individuals moving in and out of poverty (Rank and Hirschl, 1999). Following individual outcomes over a period of time thus carries the potential to reveal substantive findings which are not possible to observe otherwise.

In an ideal world, data would be available to track individuals over the entire life course; however, such analysis is not possible in this paper since young adults from recent decades, who cannot be observed into future life stages, are the object of study. Still, in spite of this limitation, several justifications exist for adopting the life course framework to study the transition to adulthood. First, researchers within the life course paradigm have made the case that, in addition to well defined life stages, a complete picture of the life course must also "include more marginal periods and

events—such as brief periods of training, second or part-time jobs, periods of unemployment or sickness" (Settersten and Mayer 1997: 252). I argue that the transition to adulthood should also be highlighted as a critical juncture within the life course. This point is also emphasized by Rindfuss who, in a 1991 presidential address to the Population Association of America, refers to the transition to adulthood as a period of high "demographic density" in reference the concentration of critical life events in the realm of family, education, and employment occurring within a relatively short amount of time (Rindfuss 1991).

Within the larger life course, the transition to adulthood is influenced by earlier life stages and is also highly influential upon subsequent outcomes. Although the relationship between childhood family background and economic outcomes in the transition to adulthood remains understudied, one study finds that social class, measured by parental income and educational achievement, is the strongest predictor of later outcomes in the transition to adulthood (Osgood et al, 2005). In terms of later life outcomes, recent literature from economics suggests that negative economic experiences in the transition to adulthood can have persistent effects much later in the life course. For instance, Bell and Blanchflower (2009) find that periods of unemployment in the young adult years have a negative impact on wages and health over twenty years later and Kahn (2010) also finds negative effects on wages twenty years later for college graduates entering the job market in a bad economy. These studies highlight the necessity for more research on this conjuncture in relation to the

overall life course.

In terms of methodology, the present study incorporates the life course perspective's emphasis on time in two additional ways. First, individuals are followed for a six year interval (from ages 25-30), as opposed making comparisons from single year observations. Even though only relatively small window of time is included here, there is a potentially substantive effect as Hacker (2006) finds that American workers in the mid 1990s faced almost five times greater income instability than in the 1970s. Given the high risk of income instability, it is likely that following young adults over this six year interval will reveal a significantly higher incidence of poverty than cross sectional rates would indicate. The second way this study relates to the life course perspective's emphasis on time is that I take advantage of the panel study design of the PSID to examine the link between childhood family socioeconomic status and economic outcomes in the transition to adulthood, thus this paper aims to draw empirical links between the life stages of childhood and adulthood.

Considering the role of historical events in shaping how individual lives unfold

The second major element of the life course perspective considers the influence of historical events in its examination of how lives unfold. Historical events in this framework operate on multiple mechanisms of influence upon the individual life course: period effects, age-related cohort effects, and status group effects.

When examining historical events, it is necessary to keep in mind that "social

change has differential consequences for persons of unlike age" (Elder 1974: 8). This point is dramatically illustrated through the case of the Great Depression. For instance, Elder finds that in addition to the period effect of living through the economic turmoil of the Great Depression, the cohort effect of one's age at the time of the Great Depression had the greatest impact on the subsequent life course. Individuals in their late teens or early twenties in the era were "under obligation to help struggling parents with family support and would be severely limited in options for employment and advanced education" (Elder 1974: 273), whereas younger children might not suffer this same disadvantage. Period effects, therefore, must be considered alongside age-related cohort effects. In this paper, age-related cohort effects are considered implicitly in the study design since only individuals age 25-30 are included. Period effects are studied by examining whether economic outcomes among individuals passing through this age interval differ between the 1980s, 1990s, and 2000s.

Finally, one additional nuanced point is necessary with regard to cohort groups: in addition to age-related cohort effects it is also necessary to consider other status groups which simultaneously shape divergent outcomes across the life course. Elder points this out also, recognizing that, "a specific stimulus condition in an historical period tends to vary in its effect across different subsets of age group, defined by class, sex, ethnicity, etc" (Elder, 1974: 16). Substantial research exists regarding inequalities in economic outcomes based on social status characteristics, in both

longitudinal and cross sectional studies. This literature will be reviewed in more detail in the following sections where I divide differential status group outcomes into three categories: non-metro residence, family background, and individual level variables. In addition to historical context, examination of divergent outcomes relating to each of these three categories of status groups (and their relative influence on the economic outcomes of individuals age 25-30) forms the core of my analysis.

III. Literature Review

Non-metro v. Metro Residence

The primary status group inequality examined in this paper is non-metro vs. metro residence. Although a large body of literature examines residential differentials in economic outcomes, few studies focus specifically on young adults in non-metro areas.

In the early 1990s, scholarship on poverty was criticized for adopting an excessively urban lens, and focusing primarily on an urban underclass (see Anderson 1990; Wilson 1987). This occurred even at a time when over 9 million experienced poverty out of a total of total rural population of 56 million (RSS Task Force: 29). A critical point in scholarship on rural areas occurred in 1993 with the publication of a book by the Rural Sociological Society Task Force on Persistent Poverty which set out to challenge this urban bias and "provide conceptual clarification regarding the factors and dynamics of society which precipitate and perpetuate rural poverty" (RSS

Task Force: 3). Though written almost 20 years ago, much scholarship since this time has framed research on rural poverty in reference to the theoretical explanations advanced in this book (see Cotter 2002; Lichter et al 1994; Brown and Hirschl 1995; Slack 2010).

The Task Force report highlights ten theoretical explanations for rural poverty. These explanations are not intended to be mutually exclusive but rather to augment each other as "each theory provides useful, but limited explanations for persistent rural poverty" (RSS Task Force: 11). These explanations can be roughly broken up into two major categories. The first group situates rural areas within larger macro-economic shifts which affect economic structure at the sub-national or community level. From this perspective, global economic restructuring leads to a declining manufacturing sector in the global North as production is outsourced and a rise in unstable, primarily service sector employment occurs at the community, regional, or national level. These macro-economic shifts are experienced differently across urban and rural areas. A second group of theoretical explanations for rural-urban economic inequality point to differentials in human capital at the individual or household level. From this perspective, rural individuals and households are at a disadvantage due to lower levels of education and marketable skills. (RSS Task Force, 1994)

Scholars have used these varied theoretical explanations in order to investigate differentials in non-metro economic outcomes empirically. In general, however, evidence remains inconclusive as to what might explain higher concentrations of

poverty in rural areas. Lichter, Johnston, and McLaughlin (1994) conclude that rising rates of non-metro poverty between 1979 and 1989 at any age cannot be explained by differences in "work attachment, human capital, or job characteristics." Similarly, Brown and Hirschl (1995) conclude, after controlling for both household-level poverty determinants and community-level aspects of local economic structure, that these factors do not adequately explain why non-metro residents still have a higher probability of experiencing poverty. Finally, Cotter (2002) finds that a higher likelihood of poverty still exists in rural areas after controlling for a number of household and labor market variables. Given the ambiguous evidence explaining why rates of rural poverty are higher there is substantial opportunity to re-examine this question.

As mentioned previously, studies examining economic outcomes specifically among young adults in non-metro areas are few. Lichter, Johnston, and McLaughlin (1994) find that poverty rose substantially for non-metro young adults (in this case defined as ages 19-24) between 1979 and 1989: in 1979 non-metro young adults did not have a significantly higher risk of poverty than 35-44 year olds, however by 1989 young adults ages 19-24 were 1.93 times more likely to experience poverty. No other quantitative studies exist on this subject. In qualitative work, Carr and Kefalas (2009) present a case study of one small Iowa town and examine how the context-specific pressures of rural life interact to shape the divergent trajectories of its young adults. The authors also find that social institutions, especially local schools, within the town

play a major role in shaping the future trajectories of its young adults and—in many cases—influence the town's most talented youth to migrate in search of success elsewhere while underinvesting in those who are most likely to stay (Carr and Kefalas, 2009). Both of these studies examining economic outcomes among young adults in non-metro areas inform the present study, but also leave open substantial opportunities for examining period effects, incorporating panel data, and investigating the relative influence of specific family background and individual factors in shaping economic trajectories in the transition to adulthood. Based on above studies, it is hypothesized that a residential effect may persist in non-metro areas even after controlling for period effects, family background, and individual level variables.

Period Effects and Regional Context

Historical context is an important factor over the time period examined and is thus considered alongside status group inequalities. In the time period following WWII and into the mid 1970s, the general macro-economic climate in the US was one of growth where wages rose and reductions occurred in both poverty and inequality (Massey 2007). However, since the late 1970s and continuing to the present time, this situation has changed dramatically, as incomes for those at the top of the income distribution have risen while at the lower end workers experience stagnating real wages and growth is concentrated in low skill service-sector jobs with little prospect

for mobility—this situation has been referred to as the "Great U-Turn" (Harrison and Bluestone 1998).

Trends in non-metro areas have largely paralleled metro areas, though with some variations in timing. Non-metro areas experienced significant growth in manufacturing industries after this industry had already started to decline in metro areas as "from 1960 to 1970, manufacturing grew by only 4 percent in metro areas but 22 percent in non-metro areas" (Roth, 2000: 15). This temporary rise of rural manufacturing was largely an attempt on the part of urban manufacturers to move away from the high costs associated with organized labor in cities toward cheaper labor in rural areas. Slack (2010) finds evidence that non-metro workers benefitted from this expansion through the late 1970s since non-metro rates of working poverty at this time were the lowest that they would be for at least the next twenty-five years.

However, in the farm crisis and economic recession of the early 80s rural areas were hardest hit. This is a period also when many rural manufacturers packed up and moved overseas, and the largest job creation in this time period occurred with broadly defined low-wage service sector industries (Roth, 2000). Jensen (1999) finds that rates of rural underemployment spiked from 18.8 percent in 1978 to a staggering 29.3 percent in 1983, with almost a quarter of the non-metro labor force remaining underemployed through the mid-1990s. Slack (2010) also finds the highest difference between non-metro and metro rates of working poverty during this time period.

In the 1990s, overall poverty rates fell in the latter part of the decade only to

begin rising again in the early 2000s (DeNavas-Walt, Proctor, and Smith, 2009). Non-metro areas, however, did not benefit as much as metro areas from the economic growth of the 1990s as both Slack (2010) and Jensen (1999) found consistently higher rates of non-metro working poverty and underemployment in this time period. Trends in the shift away from manufacturing continued and intensified in the 1990s with 97 percent of all job growth in the decade occurring in the service sector (Goodman and Steadman, 2002). Furthermore, within the service-sector job quality was increasingly bifurcated, with non-metro areas being less able to attract higher quality service sector occupations (Meisenheimer, 1998). Evidence also exists that since non-metro areas generally have less economic diversity, large scale economic restructuring has had a more significant effect (McLaughlin, 2002). By 2009, near the beginning of the Great Recession, overall poverty rates had risen back to 14.3 percent, getting close to the worst 1980s levels (DeNavas-Walt, Proctor, and Smith, 2009).

In addition to period effects, one other contextual variable is important to emphasize here: rural poverty has historically been concentrated in the South. More than 55 percent of the rural poor lived in the South in 1990 (Dundenhefer, 1993). Furthermore, of persistently poor counties with high rates of poverty (above 20 percent) throughout the past thirty years, most are located in rural areas in the South (Beale and Gibbs, 2006). For this reason, region of residence should be considered as a contextual effect alongside period effects.

Based on this history, it is hypothesized that period effects will have a

significant influence on economic outcomes in the transition to adulthood and that the probability of experiencing poverty will be lower and economic attainment will be higher in the 1990s.

Family Background & Individual Level Variation

In addition to residence and period effects, other scholarly literature examines the influence of family background and individual level variables on economic outcomes. Evidence is reviewed here which suggests that differential status group outcomes relating to characteristics of non-metro family background and individual level variables are important factors in predicting divergent economic outcomes in the transition to adulthood.

In reference to family background variables, I return to the life course perspective's emphasis on time, highlighting the importance of childhood socioeconomic status in relation to economic outcomes in the transition to adulthood. Existing research has empirically established a strong link between childhood family income and later adult earnings (Duncan, Ziol-Guest, and Kalil 2010; Holtzer et al 2007). In addition, others use income and parental education as proxy measures for social class. Duncan (1996) finds that social class, measured this way, plays a critical role in perpetuating poverty in areas with high poverty concentrations such as rural Mississippi and Appalachia. McGrath et al (2001) also find that, in rural areas, low

levels of parental income and education put youth at a significant disadvantage in terms of college attendance. Finally, Osgood et al (2005) find that the social class of one's family, measured by parents' income and educational achievement, is the strongest predictor of outcomes in the transition to adulthood.

At the individual level, research has established that a number of status group characteristics are important predictors of poverty and inequality also. A large body of literature examines differential outcomes along the lines of gender, marital status, and race. Corcoran and Matsudaira (2005) find that gender-based inequality during the transition to adulthood, defined as ages 25-27, deceased between the 1970s and 1980s and white women gained the greatest advantage from the rise job opportunities in the service based economy. However, these advantages were not evenly shared across the board; at the household level changes in family structure in the 1980s led to a rising number of female headed households. These households experienced higher rates of poverty since many employment opportunities were concentrated in unstable, low wage jobs within service or retail trade sector (McLaughlin, Gardner, and Lichter 1999; Albrecht 2000). Furthermore, examining data from 1980 to 2000, Snyder and McLaughlin (2006) find that female headed households—particularly those with children—in non-metro areas experienced greater risk of poverty than in metro areas.

Conversely, marriage provides some insulating benefit against poverty and increasing probability of affluence (Hirschl, Altobelli, and Rank 2003) and non-metro women had higher rates of marriage and marry at younger ages than metro women

(Snyder, Brown, and Condo, 2004). Both marriage and gender are likely important individual factors. In terms of race, Corcoran and Matsudaira (2005) find that race-based inequality in the transition to adulthood increased between the 1970s and 1980s, with widening gaps between African American and white young adults. Some evidence exists also that non-metro racial minorities may be at a significant disadvantage as they are more likely to be underemployed than minorities in metro areas (Slack and Jensen, 2002).

Individual education is another important predictor. Level of individual education has long been a significant predictor of later economic success in life, but Danzier and Gottschalk (1995) highlight that this situation has only increased in recent decades since economic restructuring has lead to higher demand for college educated workers while those with less education are at a significant disadvantage due to a lack of quality employment opportunities for lower skilled workers. Morris and Western (1999) also highlight the negative ramifications of these economic transformations for people with a high school education or less.

Within the context of non-metro areas educational attainment is closely related to migration. Reviewing data from 1989 to 2004, Domina (2006) finds that non-metro college graduates are three times more likely to move to a metro area than those without a college degree. This result is supported by Carr and Kefalas' (2009) qualitative work where they highlight the decision of whether or not to migrate a central feature in the transition to adulthood.

Finally, in addition to level of education, evidence exists that occupation is a significant factor in poverty and economic attainment. Meisenheimer (1998) finds that the between 1972 and 1996, high wage industries grew much slower than low wage industries. Furthermore, he finds, the fastest growing industries (services and retail trade) paid some of the lowest wages and were characterized by high rates of part time work and low benefits.

To summarize, in addition to residence and period effects, it is hypothesized that a number of family background and individual level characteristics contribute to divergent economic outcomes in the transition to adulthood, including: childhood family income, parental education, gender, dependent children, marital status, race, educational attainment, migration, and occupation. Previous research has examined divergent economic outcomes with regard to some of these variables, either specifically in reference to young adults or over the entire age distribution; however, the present study is unique as I will examine the relative influence of all these factors during the transition to adulthood over an extended time period—controlling for all of these factors, I will determine whether an unexplained non-metro effect still persists.

IV. Data & Methods

About the PSID & Why Use it

In order to assess the changing economic experience of young adults in non-metro areas I use the Panel Study on Income Dynamics (PSID). The study began in 1968 with a sample of about 18,000 individuals from 5,000 families in the United States. These individuals and their descendants have been followed since and, in many cases, it is now possible even to link grandparents and grandchildren in the same family. Data was collected annually up to 1997, and biannually since that time due to funding constraints. The PSID collects a large quantity of data on each individual including "employment, income, wealth, expenditures, health, marriage, childbearing, child development, philanthropy, education, and numerous other topics;" the PSID is the "longest running longitudinal household survey in the world" (PSID, 2011). The data set is designed to be representative of the nonimmigrant US population in any given year when sampling weights are used to compensate for attrition and oversampling of minority populations (Fitzgerald, 1998*;* Kim and Stafford, 2000).

The PSID is especially appropriate for my study for several reasons. First, since the PSID is longitudinal, it allows for measurement of economic attainment across the individual life course and facilitates comparison across time periods. Second, the data is well suited for assessing non-metro inequality since it samples disproportionately

from rural individuals and rural minorities (and uses sampling weights to correct for over-sampling). Finally, the PSID includes detailed information on a wide variety of both family level and individual level variables thus allowing comparisons between these status groups.

The present study makes use of a sample of individuals who are classified as either a PSID "head" or "wife" at age 25 in the 1980s, 1990s, and 2000s—thus information from 24 waves of the PSID is used (in addition to data on family socioeconomic status from the waves of the PSID between 1968-1995 since family income is measured at age 12 to 16). The sample includes only individuals who are designated as either PSID "head" or "wife" at age 25 since total family income is used as the outcome variable—including other individuals would most likely conflate young adult and parental income. This caveat is important to note, as the conclusions drawn from this sample cannot necessarily be generalized to all young adults at this age, but rather those who had formed their own household by the age of 25. Finally late entrants, meaning those who enter the population at risk after age 25, are not included in the sample since evidence exists that including these cases can lead to left censoring in survival analysis (Grieger and Danziger, 2011).

Outcome Variable

The outcome variables are calculated from total family income. As defined by the PSID, this measure includes earnings of the head and wife, other family members,

and cash transfers from government programs or investments—these are also the components included in the Census household poverty thresholds (DeNavas et al. 2008). Using total family income to measure individual level outcomes is the common approach in poverty research since family income most accurately reflects the monetary resources available to a given individual (Lichter et al 1994, Rank and Hirschl 2001).

Rather than using the actual total family income as the outcome variable, two variables are calculated from this value in order to reflect poverty and economic attainment. Poverty is defined as a family income which falls below the Census poverty threshold for a given year while economic attainment is defined as a family income greater than five times the poverty threshold for a given year. The choice of five times the poverty line is subjective, but it is intended to reflect a high level of economic attainment—this measure follows the precedent of other research which uses a given multiple of the poverty line to reflect affluence or economic attainment (Danziger and Gottschalk 1995; Rank and Hirschl 2001).

A note is required on the Census poverty thresholds. The poverty measure was originally developed in 1963 by Social Security Administration economist Mollie Orshansky. She defined the measure as three times the income needed for a low cost food plan, and the measure has changed little since this time (Fisher, 1992). Different thresholds are calculated based on family size and each of these thresholds is adjusted annually in order to compensate for inflation. For instance, the poverty threshold in

the year 2000 was $8,794 for a family of one person, $13,738 for three persons, and $20,819 for five persons. This threshold as been criticized on a number of fronts for being either inaccurate or overly simplistic (Brady 2003; Blank 2008), but remains a useful measure since it is used extensively as a benchmark in other research and policy. Using this measure in calculation of the outcome variable ensures comparability with existing research.

Analytic Strategy

The strategy adopted in this paper is to track individuals age 25 to 30 from 1980 to 2009 and identify patterns of unequal risk of poverty or likelihood of economic attainment based on residence, contextual effects, family background, and individual level variables. The age 25 is selected as the beginning of the interval in order to minimize the influence education since most individuals will have completed schooling and will be settling into full time employment. Two statistical techniques from survival analysis are used to this end: life tables and the Cox proportional hazards model. The event is defined as experiencing one year of poverty, or one year of economic attainment during the interval. Analysis is conducted separately for poverty and economic attainment.

Life tables are utilized since they provide an efficient means to examine how an event is experienced over a specific interval, especially when dealing with a large number of cases (Hosmer and Lemshow, 1999). The total sample population enters

the life table at age 25, each individual contributes one person year to the life table until experiencing the event, or the interval ends at age 30. Therefore, each individual contributes a minimum of one and a maximum of six person-years to the life table. The cumulative proportion of individuals experiencing poverty or economic attainment at each age in the interval is then calculated from the life table. Results from the life table will be calculated separately for non-metro and metro areas, and for all individuals, in reference to both poverty and economic attainment. The results will provide descriptive information on the likelihood of experiencing these events at each age in the interval based on residential status.

However, life tables are not well suited for examining the influence of a large number of covariates on the probability of experiencing a given event. The Cox proportional hazard model is therefore introduced for a series of multivariate models which compare the relative influence of residence, contextual effects, family background, and individual level variables on the probability of experiencing poverty or economic attainment during the interval. Cox (1972) first introduced the proportional hazard model which models the relative effect of one or more covariates on the hazard of experiencing a specific event over time. The model is widely used because does not assume a particular distribution of survival times and the resulting exponentiated coefficients have a very concrete interpretation: they represent the risk ratio of experiencing an event compared to a reference category of that particular covariate, net of all other variables included in the model (Hosmer and Lemeshow,

1999). For instance, if gender is included in a given model where men are the reference category and eβ=2 for women then women are interpreted to have twice the risk of experiencing the event both compared to men, and net of any other covariates included in the model.

In this paper, I adopt a stepwise strategy in order to assess the relative influence of four groups of predictor variables on the risk of experiencing poverty and the likelihood of economic attainment, this approach is summarized below in Table 1. The goal of the five models is to compare the relative influence of each variable category on the overall model and ascertain whether the binary non-metro vs. metro predictor variable will remain significant in the final model. If so, then a residential difference persists even while controlling for all other variables which are hypothesized to affect economic outcomes in the transition to adulthood. The Complex Samples extension of SPSS statistical software was used in order to accurately report standard error values in the weighted Cox models.

Table 1: Stepwise Analytic Strategy

Model 1	Model 2	Model 3	Model 4	Model 5
Residence	Residence	Residence	Residence	Residence
	Contextual Variables			Contextual Variables
		Family Background Variables		Family Background Variables
			Individual Variables	Individual Variables

Measurement and Covariates

In this section I detail how the four variable categories above are operationalized and specifically which PSID variables are used. Areas where measurement over time is an issue are highlighted.

In reference to economic outcomes, the primary covariate of interest is residence. The Census definition of a metropolitan core based statistical area (CBSA) is used to define a metro area. By this definition, a metro area is a county "containing the core, plus adjacent outlying counties having a high degree of social and economic integration with the central county as measured through commuting with a core urban area of 50,000 or more in population" (U.S. Census Bureau, 2012). Non-metropolitan areas in this classification scheme include counties with either a core area of 10,000 to 49,999 people (designated by the Census Bureau as micropolitan) or counties not associated with a core area. This county level residential coding for non-metro vs. metro is available every year in the PSID. Measurement over time is also an issue since many individuals often change residence, especially during this period of the life course. A specific definition is adopted here in order to account for the influence of residential migration: in order to be classified as a non-metro resident an individual must reside in a non-metro area for the majority of the interval at between the ages 25 and 30. The same definition is adopted for a metro resident.[2] This definition is

[2] County reclassification of the metro vs. non-metro status occurs following the decennial Census. It is possible that county level reclassification may have some influence on residential designations used in this paper, especially during the 2000s. Brown, Cromartie, and Kulcsar (2004) find that population growth in non-metro counties during the 1980s was

intended to reflect the status which best describes individual residence over the interval while minimizing the influence of migration.

Contextual variables include the decade in which an individual passed through the age interval and region of residence. The decade variable is included in order to control for period effects between the 1980s, 1990s, and 2000s.[3] Region is included as the other contextual covariate in order to isolate the effect of non-metro residence from potential differentials in poverty and economic attainment related specifically to residing in the South.

Two family background variables are included which reflect parental socioeconomic status: average family income from the age of 12-16 and parental education. Average parental income is measured from the ages 12-16 in order to establish family income during formative ages within the limits of PSID data (individuals who turned 25 in 1980 were 12 years old in 1968, the year the PSID began data collection).[4] Income for each year is converted to dollars from the year 2000 using the Bureau of Labor Statistics consumer price index. The resulting average income from age 12 to 16 is expressed in income quintiles for the year 2000 in order to facilitate comparisons between income levels. Parental education is included, referring to the maximum level of education achieved by either parent.

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only 3 percent, but increased to 10 percent during the 1990s. After reclassification, following the 2000 Census, it is possible that some individuals residing in reclassified counties could be mistakenly classified as migrants based on the PSID data. Future access to restricted, geo-coded PSID files could eliminate this influence.

[3] Cases which pass through the interval between multiple decades are excluded in order to isolate the influence of period effects.

[4] Family assets are not included in this section since asset data is only collected in selected years of the PSID, making continuous comparisons over time inaccurate.

Finally, seven individual level covariates are included in the model. Gender, race, and education are measured when the individual is age 25. Marital status is another covariate which has the potential to change over the interval. Marriage is included in the model as a time varying covariate since annual data is available and change in marital status can have a dramatic impact on experiencing poverty.[5] Whether or not dependent children are present in the household is also included as a time dependent predictor. Occupation is observed at age 25 and recoded into one of four broad categories, condensing hundreds of Bureau of Labor Statistics Standard Occupation Codes into a more manageable format for analysis. The reclassification scheme used in this paper is similar to one used in previous research (see Lichter, Johnston, and McLaughlin, 1994; De Anda, 2010). Finally, migration status is included, this includes a change of status from non-metro to metro or vice versa, in order to see if any change in residential status might have an influence on economic outcomes. A migrant is defined here by observing residence at age 16 then comparing this to residence at age 25 and at least two other years during the interval. For instance, an individual is classified as a migrant if he or she lives in a non-metro area at age 16, lives in a metro area at age 25, and continues living in a metro area for two additional years during the interval.

[5] The PSID defines a couple as "married" if they have been living together for more than one year, thus is it not possible to distinguish between married and cohabitating couples.

Table 2: Descriptive Statistics

Variable[6]	Non-Metro(%)	Metro(%)	All (%)
Weighted Percentages:			
Family Income Quintile (age 12-16)[7]			
-1st Quintile (<$17,955)	9.9	6.5	8.0
-2nd Quintile ($17,956..$33,006)	20.2	18.0	18.9
-3rd Quintile ($33,007…$52,272)	37.8	25.7	30.9
-4th Quintile ($52,273…$81,960)	24.4	33.3	29.4
-5th Quintile (>$81,961)	7.7	16.5	12.7
Parent's Education			
-Less than HS	23.8	18.1	20.4
-High School	40.0	37.1	38.2
-Some College	19.0	20.2	19.7
-College Degree+	17.2	24.6	21.7
Gender			
-Male	44.7	42.4	43.3
-Female	55.3	57.6	56.7
Race			
-White	72.6	56.0	62.6
-Non-white	27.4	44.0	37.4
Education			
-Less than HS	17.5	17.4	17.5
-High School	52.0	40.9	45.2
-Some College	20.5	27.2	24.6
-College Degree+	9.9	14.5	12.7
Married			
-Not Married	38.7	53.4	47.6
-Married	61.3	46.6	52.4
Occupation			
-Managerial & Professional	21.0	26.1	24.0
-Services	13.4	16.9	15.5
-Sales & Office Support	21.1	27.6	24.9
-Production, Transport, Handlers	44.5	29.4	35.6
Region			
-South	42.7	25.3	32.8
-Non-South	57.3	74.7	67.2
Decade			
-1980s	38.6	52.6	47.1
-1990s	27.5	23.1	24.8
-2000s	34.0	24.3	28.1
Migrant			
-Yes	21.1	14.3	17.0
-No	78.9	85.7	83.0
	43.0	57.0	
Unweighted N	**1346**	**2068**	**3414**

[6] All variables measured at age 25 unless otherwise noted.

[7] Family Income from each year between the ages 12 to 16 is converted to year 2000 dollars then averaged. The resulting average is expressed in reference to the Census household income quintiles for the year 2000.

V. Results

The sample of all PSID individuals designated as either household "head" or "wife" at age 25 in the 1980s, 1990s, and 2000s yields an unweighted total of 3414 cases. Weighted descriptive statistics for each covariate are presented by residence in Table 2. A number of compositional differences are observed between young adults in metro and non-metro areas. Non-metro areas are characterized by substantially smaller proportions of racial minorities, higher rates of marriage, and a higher proportion of individuals in physical labor occupations. In addition, non-metro young adults are disproportionately concentrated in the South, have lower levels of college attendance, and are less likely to experience high levels of parental income in the teenage years.

In Table 3 and Table 4, life tables display the cumulative proportion of non-metro, metro, and all young adults experiencing a year of either poverty or economic attainment each year between the ages 25 and 30. At age 25, there is very little difference in the proportion of non-metro vs. metro young adults who experience a year of poverty; however, the non-metro incidence of poverty rises slightly faster for the next five years. By age 30, roughly 25 percent of non-metro young adults experienced a year of poverty while only 20 percent of metro young adults experienced the event and this difference is significant at $p < .001$. In terms of economic attainment, residential differences are even more pronounced. In the first year of the life table, at the age 25, already 7 percent fewer non-metro young adults

achieve economic attainment. Metro residents continue to achieve economic success at a higher rate until the end of the interval. By age 30, 55 percent of metro residents have experienced a year of economic attainment compared to only 42 percent of non-

Table 3: Cumulative Proportion of Young Adults Experiencing Poverty Ages 25-30 by Residence

Age	All	Non-metro	Standard Error	Metro	Standard Error	
25	0.080	0.083	.0013	0.078	.0012	*
26	0.116	0.119	.0019	0.113	.0018	
27	0.150	0.164	.0026	0.139	.0023	***
28	0.177	0.197	.0031	0.162	.0027	***
29	0.196	0.216	.0035	0.181	.0030	***
30	0.220	0.249	.0044	0.199	.0038	***
Total						

Source: PSID
Asterisks indicate significant non-metro vs. metro difference at p<0.001***, p<0.01**, and p<0.05*.

Table 4: Cumulative Proportion of Young Adults Experiencing Economic Attainment (5x Poverty Line) Ages 25-30 by Residence

Age	All	Non-metro	Standard Error	Metro	Standard Error	
25	0.161	0.123	.0018	0.190	.0026	***
26	0.258	0.204	.0030	0.299	.0039	***
27	0.315	0.251	.0036	0.363	.0044	***
28	0.357	0.297	.0042	0.403	.0049	***
29	0.407	0.341	.0048	0.455	.0053	***
30	0.497	0.422	.0060	0.552	.0061	***
Total						

Source: PSID
Asterisks indicate significant non-metro vs. metro difference at p<0.001***, p<0.01**, and p<0.05*.

metro residents. Life table results establish that non-metro residents are 5 percent more likely to experience a year of poverty and 13 percent less likely to experience a year of economic attainment between the ages of 25 and 30.

Cox Regression Models of Poverty

Analysis proceeds with the Cox proportional hazard model in order to establish whether residential differentials in poverty and economic attainment found in the life tables remain significant in multivariate analysis. Results from models on the incidence of poverty are presented in Table 5.

Results from the Cox models of the experience of poverty in Table 5 indicate that, overall, residence is not a strong predictor of poverty. In the bivariate model, non-metro residents are 1.35 times more likely than metro residents to experience a year of poverty; however this difference does not remain significant in any of the other models where contextual, family background, and individual level variables are introduced.

Individual level variables appear to have the largest influence of the three major groupings as indicated by the dramatic decline in both AIC and BIC[8] values when they are introduced into the model, although family background variables also have a

[8] Both the Akaike information criterion (AIC) and Bayesian information criterion (BIC) are measures relating model deviance to the sample size and/or number of parameters. Model deviance measures the amount to which a given model diverges from the data, therefore the best model will have the lowest values for both AIC and BIC (Burnham and Anderson, 2004).

Table 5: Cox Regression Results for Poverty by Residence

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	Exp (B)	*Exp(B)*	*Exp (B)*	*Exp(B)*	*Exp(B)*	*Exp(B)*
Residence						
-Non-Metro	1.346*	1.214	1.095	1.210	1.057	
(Metro)	-	-	-	-	-	
Contextual Variables						
Decade						
-2000s		1.192			1.240	1.208
-1990s		1.229			1.403*	1.412*
(1980s)		-			-	-
Region						
-South		1.571**			1.150	
(Non-South)		-			-	
Family Background Variables						
Average Family Income 12-16						
-1st Quintile			3.416***		2.396***	2.773***
-2nd Quintile			2.245***		1.739**	1.813**
(3rd Quintile)			-		-	-
-4th Quintile			1.110		1.303	1.267
-5th Quintile			.416*		.487	.453
Parent's Education						
-Less than HS			2.948***		1.656	
-High School			1.580		1.073	
-Some College			1.159		1.025	
(College Degree+)			-		-	
Individual Level Variables						
Gender						
-Female				1.077	1.018	
(Male)				-	-	
Race						
-Non-white				1.869***	1.358	1.425*
(White)				-	-	-
Education (age 25)						
-Less than HS				2.867***	2.259*	2.540**
-High School				1.256	1.009	1.155
-Some College				.870	.848	.851
(College Degree+)				-	-	-
Married						
-Married				.406***	.455***	.444***
(Not Married)				-	-	-
Children						
-Yes				2.624***	2.339***	2.442***
(No)				-	-	-
Occupation						
-Services				2.261**	1.970**	2.068**
-Sales & Office Support				1.436	1.378	1.374
-Production, Transport, Handlers				1.502	1.372	1.407
(Managerial & Professional)				-	-	-
Migrant						
-Yes				.856	.841	
(No)				-	-	
Number of Parameters	**1**	**4**	**8**	**11**	**21**	**15**
AIC	**14,451**	**14,402**	**13,271**	**8,509**	**8,783**	**8,263**
BIC	**14,452**	**14,408**	**13,283**	**8,526**	**8,815**	**8,286**

large influence when introduced in Model 3. No significant period effects were observed when contextual variables were first introduced in Model 2—interestingly, however, a modest period effect for the 1990s did become significant in Model 5. In Model 2, residing in the South initially appeared to be a significant predictor of poverty, however controlling for race in Model 5 eliminated differences between the South and non-South.

In model 5 the AIC and BIC values increased back to a higher level, seeming to indicate that Model 4—where only individual level characteristics were included in the model—was the best fit for the data. However, since family background variables contributed to substantial reductions in AIC and BIC values on their own, Model 6 was then tested in order to include only the most significant contextual, individual, and family background predictor variables. AIC and BIC values for Model 6 were the lowest for the six models tested indicating that these selected characteristics are the best predictors of poverty in the transition to adulthood.

In terms of specific variables in the final model: parental income, individual education, children, occupation, race and decade are the strongest predictors of poverty among young adults. Socioeconomic background had the greatest influence on poverty as young adults with family incomes in the first or second quintiles were 2.77 and 1.81 times more likely to experience poverty than those in the third quintile. Individual education had the second largest influence in the final model as individuals with less than a high school education are 2.54 times more likely to experience a year

of poverty than those with a college degree. Contrary to expectations, however, educational attainment at the high school or partial college level did not leave individuals at a significant disadvantage in terms of poverty. Young adults with dependent children were 2.44 times more likely to experience poverty in a given year than those without. Service sector occupation also exposed individuals to a higher risk of poverty as these individuals were 2.07 times more likely to experience poverty than managerial and professional occupations. Finally, net of all other covariates, racial minorities were still 1.43 times more likely to experience poverty than whites.

Conversely, marriage provided a significant buffer against poverty as married individuals were 2.25 times less likely to experience poverty than non-married individuals. Gender and migration status both were not significant in Model 5, and therefore not included in the final model.

Cox regression Models of Economic Attainment

Results from Cox models of economic attainment are presented in Table 6. Overall, residence seems to have a more significant influence on economic attainment than on poverty, but this effect is ultimately controlled away for using a combination of contextual, family background, and individual level variables. In Model 1, the bivariate comparison, non-metro residents are found to be 1.48 times less likely than

Table 6: Cox Regression for Economic Attainment (5x) by Residence

Variable[9]	Model 1	Model 2	Model 3	Model 4	Model 5
	Exp (B)	*Exp(B)*	*Exp (B)*	*Exp(B)*	*Exp(B)*
Residence					
-Non-Metro	.674***	.658***	.783**	.744**	.835
(Metro)	-	-	-	-	-
Contextual Variables					
Decade					
-2000s		1.109			.856
-1990s		1.313**			1.262*
(1980s)		-			-
Region					
-South		.771**			.915
(Non-South)		-			-
Family Background Variables					
Average Family Income 12-16					
-1st Quintile			.410***		.526*
-2nd Quintile			.543***		.610**
(3rd Quintile)			-		-
-4th Quintile			1.582***		1.135*
-5th Quintile			2.312***		1.901***
Parent's Education					
-Less than HS			.650*		.862
-High School			.768*		.916
-Some College			.918		1.037
(College Degree+)			-		-
Individual Level Variables					
Gender					
-Female				.842	.838
(Male)				-	-
Race					
-Non-white				.408***	.637*
(White)				-	-
Education (age 25)					
-Less than HS				.252***	.336***
-High School				.503***	.632**
-Some College				.749*	.780*
(College Degree+)				-	-
Married					
-Married				.913	.922
(Not Married)				-	-
Occupation					
-Services				.565**	.630**
-Sales & Office Support				.762*	.764*
-Production, Transport, Handlers				.691**	.742*
(Managerial & Professional)				-	-
Migrant					
-Yes				1.128	1.096
(No)				-	-
Number of Parameters	**1**	**4**	**8**	**11**	**21**
AIC	**17,957**	**17,871**	**17,047**	**13,959**	**13,771**
BIC	**17,959**	**17,877**	**17,059**	**13,976**	**13,805**

[9] Asterisks indicate significance at p<0.001 ***, p<0.01 **, and p<0.05 *.

metro residents to experience a year of economic attainment.[10] The residential difference remains significant in models 2, 3, and 4 where contextual, family background, and individual level variables are introduced individually but is not significant in the final model. In terms of contextual variables, significant period effects were observed as young adults were 1.26 times more likely to experience a year of economic attainment in the 1990s than in the 1980s. No significant period effects were found in the 2000s.

As a variable grouping, individual level variables were again the most influential predictor of economic attainment since they had the largest impact on AIC and BIC values. Both family background and contextual variables were also influential in the final model. Again, residing in the South initially appeared to be a significant predictor of economic attainment in Model 2, but this result did not remain significant when race was introduced in Model 5. Both AIC and BIC values were lowest in Model 5.[11]

Among specific variables, the most significant predictors of economic attainment were: individual education, parental income, occupation, race, and

[10] In order to facilitate comparisons to results from the poverty models, risk ratios are expressed here as a value greater than one: 1 / 0.674 = 1.48.

[11] Model 6, where the only the most significant covariate predictor variables are included in the model, is not presented here since AIC and BIC values were higher than in Model 5—only Model 5 is presented here to avoid confusion since this reflects the best fit. Model 6 was likely not as strong due to several predictors, such as parental education, which were not quite significant at $p<.05$, but still have a positive influence in the final model.

decade.[12] On the whole, advantaged statuses had a higher influence on the likelihood of economic attainment than they did on poverty. For instance, in terms of individual education, compared to college degree holders, negative effects were significant for some college (1.21 times), high school education (1.58 times), and less than high school education (1.28 times). The same effect was observed in terms parental income where, compared to the middle quintile, those with incomes in the highest quintile were 1.90 times more likely and those in the lowest quintile 1.90 times less likely to experience the event. Occupation categories other than managerial and professional all experienced a significant disadvantage. Racial minorities were 1.57 times less likely than whites to experience a year of economic attainment.

In contrast to poverty, marital status was not a significant predictor of economic attainment. Parental education was initially significant in Model 3, but this effect was controlled away in the final model. Migration status also was not a significant predictor.

VI. Discussion

Findings about the experience of poverty and economic attainment are varied. On the one hand, evidence is found that a high percentage—22 percent—of young

[12] Results for whether dependent children were present in the household are not included in the models for economic attainment since the method of calculating the outcome variable gives a very large influence to household size, therefore giving this variable an overwhelming (and misleading) influence in the final model. For instance, in 2011, five times the poverty threshold for an individual was $55,000 for an individual but would have been $95,000 for a married couple with one child. Future research might explore an alternative method for calculating thresholds of economic attainment adjusted for household size.

adults across the United States between the years of 1980 to 2009 experienced a year of poverty between the ages of 25 and 30. On the other hand, 50 percent of American young adults experienced a year of economic attainment across the age range indicating that substantial opportunity also exists for economic success. This result is largely consistent with other life course research which finds that the "opportunity for both extreme economic failure and success appears to be a very real component of American society" (Rank and Hirschl, 2001). This trend seems also to be true specifically within the transition to adulthood.

After disaggregating general trends, differential outcomes with regard to both poverty and economic attainment were observed by residence. Life table results indicated both a higher concentration of poverty (5 percent higher) and a lower concentration of economic attainment (13 percent lower) among young adults in non-metro areas between the ages 25 to 30. This elevated concentration of negative economic outcomes is consistent with a large body of literature which finds elevated concentrations of poverty in non-metro areas (Lichter, Johnson, and McLaughlin 1994; Jensen 1999; Slack 2010)—though this study is the first to quantify this trend specifically among young adults in non-metro areas. However, this paper sought to go further and examine whether this difference would persist after introducing a number of relevant covariates into multivariate models.

By introducing the multivariate Cox regression models, this paper answered one central research question: controlling for historical context, family background,

and individual level variables, does a residential difference in poverty or economic attainment persist between non-metro and metro areas in the transition to adulthood in the United States? Based on the results outlined in the previous section, and contrary to expectations, this question is answered in the negative. In models for both poverty and economic attainment, the non-metro residential effects were ultimately controlled away for by the other variable groupings. This finding stands in contrast to earlier research which did find residential differences even when controlling for a variety of individual, household, and community level factors (Lichter, Johnston, and McLaughlin, 1994; Brown and Hirschl 1995; Cotter 2002). One important caveat must be maintained: these results show that an unexplained non-metro effect on economic outcomes does not exist *at the ages of 25 to 30*. The finding does not eliminate the possibility that non-metro individuals experience a residential disadvantage at any age. Still, the central finding of this paper is that differences in non-metro vs. metro poverty and economic attainment can be explained by a combination of individual and family background factors (with period effects also proving significant in the 1990s).

Since residential difference was not found to be significant predictor of economic outcomes, the more important question then shifts to which factors are found to be the most important. The finding with the most direct policy implications is that a combination of both family background and individual characteristics has the greatest impact on the likelihood that individuals will experience poverty or economic

attainment. Specifically, the two variables with the largest influence on economic outcomes are individual education and family income from age 12 to 16. These results are consistent with earlier findings which indicate the salience of both parental income (Duncan 1996; Osgood et al 2005) and individual educational attainment (Danziger and Gottschalk 1995; Morris and Western 1999) in shaping divergent economic outcomes. The result in this paper is unique, however, since it establishes that the relative influence of each of these factors is roughly equal in magnitude indicating that a very significant risk of poverty exists both for American young adults with low levels of parental income and education below the high school level. Interestingly, highly advantaged statuses—such as having a college degree or levels of parental income in the highest quintiles—were not necessary to insulate individuals from poverty, but were very significant predictors of economic attainment. This result ultimately demonstrates both some evidence of potential income mobility based on individual educational attainment and the large, unachieved influence of family socioeconomic status in shaping future outcomes.

Interestingly, category of occupation remained a significant predictor of both poverty and economic attainment even when education and other individual characteristics were included in the model. This significant risk of poverty faced by workers in service sector occupations is consistent with findings about the low wages and unstable work arrangements provided by this type of occupation (Meisenheimer 1998, Hacker 2006). Occupations in physical labor related jobs and sales or office

support provide insulation from poverty, but ultimately offer little potential for achieving the levels of economic success found in managerial and professional occupations. Furthermore, results are consistent with findings by Morris and Western (1999) indicating the significant disadvantages faced by workers with less than a high school education in the service economy—suggesting an interaction between education and occupation.

Period effects did have a modest effect on economic outcomes between the 1980s, 1990s, and 2000s. Young adults in the 1990s were more likely to experience both poverty and economic success than in the 1980s. This result is surprising since overall poverty rates fell amid economic growth during the 1990s (Denavas et al, 2009); however, this trend is consistent with age-specific trends showing that young adults experience a higher risk of poverty than other ages (Sandoval, Rank, and Hirschl, 2009). Higher probabilities of both economic attainment and poverty in the 1990s likely reflect basic labor market processes which were occurring during this time since the vast majority of all job growth occurred in the broadly defined service sector within which job quality was increasingly bifurcated—with jobs at the lower end of this spectrum providing little insulation from poverty (Goodman and Steadman 2002; Meisenheimer 1998).

Another central area of focus relates to divergent outcomes by race, gender, and family structure. Divergent outcomes for racial minorities were strong and negative in the case of both poverty and economic attainment lending further

evidence to the continuing racial disadvantages found by other researchers (Corcoran and Matsuadaira 2005; Slack and Jensen 2002). Gender differences were not significant in either set of models, however females included in the study were likely to be married for much of the interval (and thus have the same family income as their husbands). Had the study adopted a more specific focus on female-headed households, differentiating also between female headed households with and without children under the age of 18, negative effects likely would have been found consistent with earlier research finding higher rates of poverty among female households (McLaughlin, Gardner, and Lichter 1999; Albrecht 2000). Individuals with children under the age of 18 had a substantially increased risk of poverty. On the contrary, marriage (or possibly cohabitation, due to the PSID definition of marriage) was found to provide significant protection against poverty, likely due to more efficient household economics; but marriage did not have any significant effect on the likelihood of experiencing economic attainment in young adulthood. Previous research by Hirschl, Altobelli and Rank (2003) found that marriage increased the likelihood of affluence between the ages of 25 and 45, however since this study only examines a six year window it is possible that the positive influence of marriage on high levels of economic attainment does not occur until later ages.

One final factor which was not found to be significant was migration; however future research is necessary in order to fully disentangle the influence of migration on economic outcomes in the transition to adulthood. The definition of migration

included here encompasses a residential change of status in either direction between non-metro and metro areas in order to ascertain whether any change of residential status affected economic outcomes. Earlier research by Domina (2006) and Carr and Kefalas (2009) established the salience of non-metro to metro migration in the transition to adulthood in reference to educational attainment. Future research might focus more specifically on the economic outcomes of non-metro to metro migrants, but such analysis proved beyond the scope of this paper.[13]

VII. Conclusions

This paper is the first to examine economic outcomes in the transition to adulthood both over a long period of time and with the use of panel data. The life course perspective was adopted as a central orienting framework since the transition to adulthood is a critical juncture within the overall life course—it is a highly influential life stage when a concentration of critical life events in the realm of family, education, and employment often occur in a relatively short amount of time. Time is included in this study as a central component of analysis since individuals are followed over a six year interval from age 25 to 30, and empirical links are drawn between childhood family background and economic outcomes in the transition to adulthood. Furthermore, the life course perspective provides a framework for linking historical

[13] Since specific, geo-coded residential information in the PSID is restricted, access to restricted data would also facilitate investigating this issue.

events to individual life experience. In the case of the study period, from 1980 to 2009, the ongoing historical event in over the interval has been what Massey (2007) as the "fall of egalitarian capitalism" where real wages have stagnated and stable manufacturing jobs have moved abroad, giving rise a bifurcated, though often poorly paid service sector—affecting in some way the economic experience of all individuals over the time period examined.

In response to the central research question of the paper it is found that, although non-metro young adults experience higher concentrations of poverty and lower levels of economic attainment their metro counterparts, this effect can be controlled away for primarily through a combination of family background and individual level variables. This result stands in contrast to previous research which finds a residual effect to non-metro residence even when controlling for a variety of individual, household, and community level characteristics (although this finding applies only to young adults, it does not eliminate the possibility that a non-metro effect persists at older ages). Why did this study eliminate the non-metro effect when others were unable to? One explanation may be that the life course methodology, where individual economic outcomes were followed for a period of six years, reveals a very different picture than cross-sectional studies would indicate—especially in the context of increasing income instability over the course of the study period, as documented by Hacker (2006). This central finding carries both theoretical and practical implications.

Theoretically, this finding lends support to combination of the theoretical perspectives on rural poverty advanced by the RSS Task Force on Persistent Rural Poverty in 1994. Theories of rural poverty advanced by the Task Force break down roughly into two perspectives: i) those which situate rural areas within larger macro-economic shifts which affect economic structure at the sub-national or community level, and ii) those which point to differentials in human capital at the individual, family, or household level. In this paper, the effect of residence on poverty and economic attainment was ultimately controlled away for primarily by individual education, family income at age 12-16, occupation, and race. The salience of education lends evidence to human capital explanations, but family income and individual occupation are variables related to both human capital and local economic structure. The range of occupations available, and remunerations from them, is partially a function of economic transformations occurring at the macro level. Ultimately, due to the significance of covariates relating to both individual human capital and local economic structure, I argue that evidence supports both of the primary theoretical perspectives advanced by the RSS Task Force. One opportunity for future research might be to more carefully examine community level variables (such as the county level unemployment rate or the concentration of various occupations within the area) in order to examine the influence of local economic structure more directly.

The central findings from this paper carry not only theoretical but also practical

weight. A concrete explanation of factors which contribute to higher concentrations of poverty in non-metro areas lends itself much more readily to policy recommendations than an unexplained non-metro effect. As mentioned above, the specific factors most strongly associated with both a higher likelihood of poverty and lower likelihood of economic attainment in the transition to adulthood are individual education below the high school level, low levels of family income at age 12 to 16, service sector occupation, and race. While highly advantaged statuses—such as having a college degree or levels of parental income in the highest quintiles—were not necessary to insulate individuals from poverty, but were very significant predictors of economic attainment. This result ultimately demonstrates both some evidence of potential income mobility based on individual educational attainment and the large influence of family socioeconomic status in shaping future outcomes—in addition to the continuing legacy of racial inequality in American society.

In terms of specific policy solutions to non-metro poverty, even if the factors associated with non-metro poverty may not be different from those in metro areas, specific solutions tailored to community and economic structure in non-metro areas necessary. In concluding, I echo the recommendations arrived at in Carr and Kefalas' (2009) case study of one small Iowa town. After examining how the context specific pressures of rural life interact to shape the divergent trajectories of its young adults, Carr and Kefalas find that the town underinvests in those disadvantaged youth with low levels of educational attainment, and who often have parents of lower

socioeconomic status, who are also the most likely not to migrate out of the community. The solution they call for, and which results from this study support, is for greater investment in educational programs which benefit young adults who are not destined for four-year colleges—greater investment in those with lower socioeconomic status, individual education, and often racial minorities, who are shown to in this study to experience a higher likelihood of poverty. Recommended programs make use of the infrastructure of local community colleges targeting specific skills in "academic and technical preparation for today's workforce, including metal fabrication, graphics, and media communication, agricultural GPS/GIS technology, and health science" (Carr and Kefalas: 176). Using a very different method, this study ultimately arrives at a very similar conclusion. Long term trends in deindustrialization and the rise of the service-based economy are not likely to reverse in the immediate future, but non-metro communities can take concrete steps to invest more resources in those who are at the highest risk of poverty.

REFERENCES

Albrecht, Don E., and Stan L. Albrecht. 2000. "Poverty in Nonmetropolitan America: Impacts of Industrial, Employment, and Family Structure Variables." *Rural Sociology* 65 (1):87-103.

Anderson, Elijah. 1990. *Streetwise* . Chicago: University of Chicago Press.

Beale, C., and R. Gibbs. 2006. "Severity and Concentration of Persistent High Povertyin Nonmetro Areas." *Amber Waves* 4 (1):10-11.

Bell, David, and David G. Blanchflower. 2009. "Youth Unemployment in Europe and the United States." *IZA Discussion Paper* No 5673 (Available at SSRN: http://ssrn.com/abstract=1835312):

Blank, R. M. 2008. "Presidential Address: How to Improve Poverty Measurement in the United States." *Journal of Policy Analysis and Management* 27 (2):233-254.

Brady, D. 2003. "Rethinking the Sociological Measurement of Poverty." *Social Forces* 81 (3):715-751.

Brown, David L., and Thomas A. Hirschl. 1995. "Household Poverty in Rural and Metropolitan-Core Areas of the United States." *Rural Sociology* 60 (1):44-66.

Brown, David, L., J. B. Cromartie, and L. J. Kulcsar. 2004. "Micropolitan Areas and the Measurement of American Urbanization." *Population Research and Policy Review* 23 (4):399-418.

Burnham, K. P., and D. R. Anderson. 2004. "Multimodel Inference Understanding AIC and BIC in Model Selection." *Sociological Methods & Research* 33 (2):261-304.

Carr, Patrick J., and Maria J. Kefalas. 2009. *Hollowing Out the Middle: The Rural Brain Drain and what it Means for America* . Boston: Beacon Press.

Corcoran, M., and J. Matsudaira. 2005. "Is it Getting Harder to Get Ahead? Economic Attainment in Early Adulthood for Two Cohorts." *On the Frontier of Adulthood: Theory, Research, and Public Policy* 356-395.

Cotter, David A. 2002. "Poor People in Poor Places: Local Opportunity Structures and Household Poverty*." *Rural Sociology* 67 (4):534-555.

Cox, D. R. 1972. "Regression Models and Life-Tables." *Journal of the Royal Statistical Society.Series B (Methodological)* 187-220.

Danziger, S., and P. Gottschalk. 1995. *America Unequal* Harvard University Press.

Danziger, S., and C. Rouse. 2007."Price of Independence : The Economics of Early Adulthood." in edited by Anonymous . New York : Russell Sage Foundation,.

De Anda, Roberto M., and Michael Sobczak. 2011. "Underemployment among Mexican-Origin Women." *The Social Science Journal* 48 (4):621-629.

DeNavis, Walt, B. D. Proctor, and JC Smith. 2008. "Income, Poverty, and Health Insurance Coverage in the United States: 2007"."

Dewilde, Caroline. 2003. "A Life-Course Perspective on Social Exclusion and Poverty." *The British Journal of Sociology* 54 (1):109-128.

Domina, Thurston. 2006. "What Clean Break?: Education and Nonmetropolitan Migration Patterns, 1989-2004." *Rural Sociology* 71 (3):373-398.

Dudenhefer, Paul. 1993. "Poverty in the Rural United States." *Focus* 15 (Spring):37-46.

Duncan, Cynthia M. 1996. "Understanding Persistent Poverty: Social Class Context in Rural Communities1." *Rural Sociology* 61 (1):103-124.

Duncan, Greg J., Kathleen M. Ziol-Guest, and Ariel Kalil. 2010. "Early-Childhood Poverty and Adult Attainment, Behavior, and Health." *Child Development* 81 (1):306-325.

Elder, Glen H. 1974. "Children of the Great Depression : Social Change in Life Experience."

———. 1995."The Life Course Paradigm: Social Change and Individual Development." Pp. 101-139 in *Examining Lives in Context: Perspectives on the Ecology of Human Development.* edited by P. Moen, G.H. Elder Jr., and K. Lüscher. Washington, DC, US: American Psychological Association.

———. 1994. "Time, Human Agency, and Social Change: Perspectives on the Life Course." *Social Psychology Quarterly* 57 (1):pp. 4-15.

Fisher, Gordon. 1992. "The Development and History of the Poverty Thresholds " *Social Security Bulletin* 55 (4):3-14.

Fitzgerald, J., P. Gottschalk, and R. A. Moffitt. 1998. "An Analysis of Sample Attrition in Panel Data: The Michigan Panel Study of Income Dynamics." *Journal of Human Resources* 33 (Spring):300-344.

Goodman, Bill, and Reid Steadman. 2002. "Services: Business Demand Rivals Consumer Demand in Driving Job Growth." *Monthly Labor Review* 125 (4):3-16.

Grieger, L. D., and S. H. Danziger. 2011. "Who Receives Food Stamps during Adulthood? Analyzing Repeatable Events with Incomplete Event Histories." *Demography* 48 (4):1601-1614.

Hacker, Jacob. 2006. *The Great Risk Shift: Why American Jobs, Families, Health Care, and Retirement Aren't Secure--and how we can Fight Back* . New York: Oxford University Press.

Hacker, Jacob S. 2004. "Privatizing Risk without Privatizing the Welfare State: The Hidden Politics of Social Policy Retrenchment in the United States." *The American Political Science Review* 98 (2):pp. 243-260.

Harrison, B., and B. Bluestone. 1988. *The Great U-Turn: Corporate Restructuring and the Polarizing of America* . New York: Basic Books.

Hirschl, T. A., J. Altobelli, and M. R. Rank. 2003. "Does Marriage Increase the Odds of Affluence? Exploring the Life Course Probabilities." *Journal of Marriage and Family* 65 (4):927-938.

Holzer, H., et al. 2007. "The Economic Costs of Poverty in the United States: Subsequent Effects of Children Growing Up Poor."

Hosmer, D. W., S. Lemeshow, and S. May. 2011. *Applied Survival Analysis: Regression Modeling of Time to Event Data* . Hoboken, New Jersey: Wiley & Sons Inc.

Jensen, Leif, et al. 1999. "Slipping into and Out of Underemployment: Another Disadvantage for Nonmetropolitan Workers?" *Rural Sociology* 63 (3):417-438.

Johnson, Kenneth M., and Glenn V. Fuguitt. 2000. "Continuity and Change in Rural Migration Patterns, 1950?1995*." *Rural Sociology* 65 (1):27-49.

Kahn, Lisa B. 2010. "The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy." *Labour Economics* 17 (2):303-316.

Kim, Y. S., and F. P. Stafford. 2000. "The Quality of PSID Income Data in the 1990s and Beyond." *Unpublished Manuscript, Institute for Social Research, University of Michigan*

Lichter, Daniel T., and Kenneth M. Johnson. 2007. "The Changing Spatial Concentration of America's Rural Poor Population*." *Rural Sociology* 72 (3):331-358.

Lichter, Daniel T., Gail M. Johnston, and Diane K. McLaughlin. 1994. "Changing Linkages between Work and Poverty in Rural America." *Rural Sociology* 59 (3):395-415.

Massey, Douglas. 2007. *Categorically Unequal: The American Stratification System.* New York: Russel Sage.

Mayer, Karl Ulrich. 2009. "New Directions in Life Course Research." *Annual Review of Sociology* 35 (1):413-433.

———. 2000. "Promises Fulfilled? A Review of 20 Years of Life Course Research." *European Journal of Sociology* 41 (2):259-282.

McGrath, Daniel J., et al. 2001. "Breaking New Ground: Diverse Routes to College in Rural America*." *Rural Sociology* 66 (2):244-267.

McLaughlin, Diane K. 2002. "Changing Income Inequality in Nonmetropolitan Counties, 1980 to 1990." *Rural Sociology* 67 (4):512-533.

McLaughlin, Diane K., Erica L. Gardner, and Daniel T. Lichter. 1999. "Economic Restructuring and Changing Prevalence of Female-Headed Families in America." *Rural Sociology* 64 (3):394-416.

Meisenheimer, J. R. 1998. "Services Industry in the Good Versus Bad Jobs Debate, the." *Monthly Labor Review* 121 22.

Moen, P., G. Elder, and K. Luscher. 1995. *Examining Lives in Context: Perspectives on the Ecology of Human Development* Washington, DC, US: American Psychological Association.

Morris, M., and B. Western. 1999. "Inequality in Earnings at the Close of the Twentieth Century." *Annual Review of Sociology* 25 623-657.

Osgood, D., G. Ruth, J. Eccles, J. Jacobs, and B. Barber. 2005."Six Paths to Adulthood: Fast Starters, Parents without Careers, Educated Partners, Educated Singles, Working Singles, and Slow Starters." Pp. 320-355 in *On the Frontier of Adulthood: Theory, Research, and Public Policy. Chicago: University of Chicago Press.* edited by R. Settersten, F. Furstenberg, and R. Rumbaut.

Panel Study of Income Dynamics, public use dataset. Produced and distributed by the Institute for Social Research, Survey Research Center, University of Michigan, Ann Arbor, MI (2012).

PSID. 2011. "A National Study of Socioeconomics and Health Over Lifetimes and Across Generations." 2012 (November).

Rank, Mark R., and Thomas A. Hirschl. 1999. "The Likelihood of Poverty Across the American Life Span." *Social Work* (44):201-16.

———. 2001. "Poverty Across the Life Cycle: Evidence from the PSID." *Journal of Policy Analysis and Management* 20 (4):737-755.

Rindfuss, Ronald R. 1991. "The Young Adult Years: Diversity, Structural Change, and Fertility." *Demography* 28 (4):pp. 493-512.

Roth, Dennis. 2000. "Thinking about Rural Manufacturing: A Brief History." *Rural America* 15 (1):12-19.

Rural Sociological Society Task Force on Persistent Rural Poverty. 1993. *Persistent Poverty in Rural America* . Boulder, CO: Westview Press.

Sandoval, Daniel A., Mark R. Rank, and Thomas A. Hirschl. 2009. "The Increasing Risk of Poverty Across the American Life Course." *Demography* 46 (4):717-738.

Settersten, R., F. Furstenberg, and R. Rumbaut. 2005."On the Frontier of Adulthood : Theory, Research, and Public Policy." in edited by Anonymous . Chicago : University of Chicago Press,.

Settersten, Richard A.,Jr, and Karl Ulrich Mayer. 1997. "The Measurement of Age, Age Structuring, and the Life Course." *Annual Review of Sociology* 23 233-261.

Slack, Tim. 2010. "Working Poverty Across the Metro-Nonmetro Divide: A Quarter Century in Perspective, 1979-2003." *Rural Sociology* 75 (3):363-387.

Slack, Tim, and Leif Jensen. 2002. "Race, Ethnicity, and Underemployment in Nonmetropolitan America: A 30-Year Profile." *Rural Sociology* 67 (2):208-233.

Snyder, A. R., and D. K. McLaughlin. 2006. "Female-Headed Families and Poverty in Rural America." *Rural Sociology* 69 (1):127-149.

Snyder, Anastasia R., Susan L. Brown, and Erin P. Condo. 2004. "Residential Differences in Family Formation: The Significance of Cohabitation." *Rural Sociology* 69 (2):235-260.

U.S Census Bureau. 2010. "Estimated Median Age at First Marriage, by Sex: 1890 to the Present." 2012 (October 26):

———. 2012. "Metropolitan and Micropolitan Statistical Areas." 2012 (November):

Wilson, William J. 1987. *The Truly Disadvantaged* . Chicago: University of Chicago Press.